Operational Control
Background and Exhibits

To function in line with your environmental policy, objectives, and targets, the operations and activities that are associated with significant environmental aspects (SEAs) must be under control. The facility must plan these activities, including maintenance, to ensure that they are carried out under specified conditions by establishing and maintaining documented procedures to cover situations where their absence could lead to deviations from the environmental policy (including the commitments to compliance and pollution prevention) or from your objectives and targets. These operational controls usually take the form of documented procedures, work instructions, best management practices, or posted placards.

For the SEAs for which you have established objectives and targets for improvement or study, the corresponding environmental management programs (EMPs) will serve as a form of operational control. What are left are SEAs for you to maintain compliance with legal requirements (or conformance with facility policy).

Most shipyards and ship repair facilities already have the vast majority of the necessary compliance-related operational controls documented. Even so, the job of canvassing the entire facility and its operations to match existing procedures, work instructions, best management practices, and posted placards with the list of SEAs determined in *Module 5* is a crucial one. Likewise, there are two additional tasks associated with this module:

- Ensuring that the procedures you have are suitable and adequate; and
- Filling the gaps that you have identified where new procedures will be required.

Exhibit 12-1: Partial List of Typical Activity Areas and Operational Controls at Shipbuilding and Ship Repair Facilities is an example of what a set of operational controls might include. For those indicated by an asterisk (*), examples are provided at the end of this module.

Exhibit 12-1: **Partial List** of **Typical Activity Areas** and **Operational Controls** at **Shipbuilding** and **Ship Repair Facilities**

Category of Activity	Operational Control
Purchase of Raw Materials	• Subcontractor Requirements
Tank Farm and Fuel Transfer	• Above Ground Tank Inspection • Taking on Fuel • Spill Reporting and Clean-up • Secondary Containment Inspection
Storage Raw Materials (chemicals) and Hazardous Waste Accumulation	• Hazardous Waste Area Inspection • Bulk Storage and Containment • Containerized Material Storage • Hazardous Waste Satellite Accumulation* • Container Labeling* • Empty Container Handling* • Hazardous Waste Operations Procedure • Control of Discharge and Disposal • Waste Manifest/Chain of Custody • Bulk Cargo Transfer Inspection
Drydock Operation	• Best Management Practices for Ships in Drydock • Drydock Maintenance
Wastewater Management	• Shipboard Wastewater Handling • Shipboard Sanitary Waste Disposal • Bilge and Contaminated Ballast Water* • Oily Water Transfer
Surface Preparation (Hydro and Abrasive Blasting) and Painting	• Hydro-blasting Discharge Procedure • Abrasive Blast Containment, Clean-up, and Storage* • Air Emissions Control of Blasting • BMPs of Surface Preparation and Painting • Designated Material Mixing Areas • Excess Material Handling • Environmental Requirements for Distribution and Handling of Marine Coatings • Control of Coating and Thinner Use*
Shops and Facility Maintenance	• Environmental Compliance Assessment Checklist • Procedure for Pressure Washing Near Water • Maintenance and Machine Shop Checklist • Disposition of Fluorescent Bulbs, Batteries, and Mercury Items

Exhibit 12-1: Partial List of Typical Activity Areas and Operational Controls at Shipbuilding and Ship Repair Facilities (continued)

Air Quality Management	• Abrasive Blast Containment, Clean-up, and Storage • Shrouding • Tracking of NO_X Emissions from Internal Combustion Engines
Water Quality Management	• No Dumping • Storm Drain Protection • Leaking Pipes, Hoses, and Valve Connections • Pier Scuppers • Spill Pathways • Shrouding • Sally Port Screening • Industrial Wastewater Discharge • Freshwater and Saltwater Wash-down of Ship • Graving Dock, On-Block Area, Building Ways, and Floating Drydock Cleanup • Disposal of Grey Water and Sanitary Wastewater • Water Pollution Control—General • Water Pollution Control—Vessels • Wastewater Discharges

Drafting **Operational Controls**

Use your answers to the questions provided in ***Exhibit 12-2: Element Review Questions*** to begin the process of planning documented procedures to cover operational activities and situations where their absence could lead to deviations from the environmental policy.

The sample procedure provided in ***Exhibit 12-3: Procedures for Contractors and Sub-contractors (EP-016)***, along with its sample contractor environmental briefing packet, defines the process for controlling the environmental aspects of on-site contractors and their sub-contractors, and can be customized to fit the needs of your facility.

Exhibit 12-4: Worksheet for Determining Which Operations or Activities Require Operational Controls can guide the process of establishing necessary operational controls by helping you to identify needed procedures for each operation or activity with SEA to be controlled. It is useful to involve the people who will implement the procedures in drafting these controls. You can accomplish this in several ways:

- Meet with workers and have them describe current procedures. Discuss the environmental objective desired and obtain their input on operational controls (procedures) to ensure that the objectives will be met.
- Have someone (possibly an intern) interview the workers to establish current (undocumented) procedures; then draft or revise operational controls. Have the workers and a manager review the draft and incorporate their input.

Remember to keep written operational controls simple and concise. They should include the appropriate actions, precautions, and notifications required. Focus on activities that may lead to significant impacts and avoid getting overwhelmed by trying to control every activity and process.

Designate **Responsibility** for **Maintaining** and **Reviewing Operational Controls**

Designate those people responsible for maintaining the controls and for reviewing them to ensure that procedures are followed and deviations are corrected. Generally, the workers responsible for the SEA under consideration will be responsible for implementing the associated operational controls. The immediate line manager would most likely be responsible for regular review of the controls. It is helpful to list those people responsible for each set of procedures. ***Exhibit 12-5: Worksheet for Linking EMS Operational Control Procedures to Measurement Indicators, Responsible Parties, and Location of the Documents*** might help you assign operational control responsibilities.

Develop **Operational Control-Related** Training

Achieving success in meeting environmental objectives for each SEA depends upon making sure that each person responsible for maintaining or reviewing controls has received adequate training. After operational controls are drafted, develop a training program that ensures that everyone understands the controls and their role in ensuring that they are followed. Training can include on-the-job training. ***Exhibit 12-6: Worksheet for Training Plan for Operational Controls*** is provided to help your facility to determine training needs associated with operational controls. It should help you identify, plan for, and track the training needs of your employees. This information should be combined with general environmental training when creating an integrated training needs analysis for your EMS (see *Module 8*).

Take **Corrective Action** When **Objectives** Are Not **Met**

Take action to correct failures in operational controls as quickly as possible to meet environmental objectives. You can record corrections made on the Corrective and Preventive Action Request (EF-015.01) included in *Module 15*.

Exhibit 12-2: **Element Review Questions**

Questions	Your Answers
Have we **identified operations and activities** associated with significant environmental aspects, legal requirements, and environmental objectives? If not, **how will this be accomplished**? Who should be **involved**?	
What operations and activities are associated with **significant environmental aspects**?	
What operations and activities are associated with **legal requirements**?	
What operations and activities are associated with environmental **objectives and targets**?	
How are the above operations and activities **controlled** (list methods)?	
How do we know whether these **controls are adequate** (i.e., to manage significant aspects, to ensure compliance, to achieve objectives)?	
How do we **train** employees and contractors on relevant operating controls?	
If **new controls** are needed (or **existing ones need to be revised**), what is our **process** for doing so? Who needs to be **involved** in this process?	
Our next step on operational control is to…	

Exhibit 12-3: **Procedure** for **Contractors** and **Sub-contractors** (EP-016)

1.0 Purpose/Scope

This procedure defines the process for controlling the environmental aspects of on-site contractors and their sub-contractors at the **[Facility's Name]**.

2.0 Activities Affected

All areas and departments authorizing contractors to work on-site.

3.0 Forms Used

Environmental Briefing Packet and Contractor Method Statement Template (EF-016.01)

4.0 References

ISO 14001:1996, Element 4.4.6

5.0 Definitions

Method Statement: a written statement prepared by a contractor that outlines the work to be undertaken and the method(s) for minimizing and managing environmental impacts. The method statement includes an assessment of the environmental issues associated with specified work activities and measures necessary to minimize environmental impacts.

6.0 Exclusions

6.1 Contractor activities and services that are not performed at the facility.

6.2 Contractors performing emergency services.

6.3 Contractors providing clerical, accounting, or other similar administrative services.

7.0 Procedure

7.1 A Cross Functional Team led by the Environmental Management Representative (EMR) or designee develops a process to obtain and review contractor method statements.

7.2 The need for contractor services is identified and a request for a Method Statement is prepared by the initiating activity.

7.3 Information related to contractor on-site activities shall be documented by the contractor using a Contractor Method Statement.

7.4 Completed contractor method statement forms will be submitted to the initiating activity. The EMR or designee will evaluate Method Statements to identify potential environmental issues and concerns.

7.5 Prior to on-site work contractors shall:

7.5.1 Be provided with information and documents to ensure their awareness of the **[Facility's Name]** EMS and their conformance to it.

7.5.2 Submit a completed Contractor Method Statement to the initiating activity.

7.6 While on site, contractors shall conform to the **[Facility's Name]** EMS and to all applicable legal and other requirements.

7.7 Contractors shall maintain records as specified by the EMS and by contract requirements.

Exhibit 12-3: Procedure for Contractors and Sub-contractors (EP-016) (continued)

8.0 General Rules

Contractors shall ensure their on-site staff is aware of **[Facility's Name]** requirements.

9.0 Records

Records shall be retained consistent with the Procedure for Environmental Records (EP-005).

Record of Revisions

Revision Date	Description	Sections Affected

Environmental Briefing Packet and **Contractor Method Statement Template** (EF-016.01)

Introduction

The **[Facility's Name]** Environmental Management System is designed to meet the requirements of ISO 14001 Standard. The principle elements of the EMS and environmental policy are:

1. To establish and operate effective procedures aimed at controlling environmental performance to comply with all relevant environmental legislation and regulations;

2. To set objectives and targets aimed at achieving continual improvement in environmental performance; and

3. To introduce improvements that contribute to the prevention of the pollution at the source, where possible.

An important part of the EMS relates to the control of contractors and their sub-contractors, who are required to comply with [Facility's Name] environmental policies and procedures.

The nature of the contractor activities is such that contractor personnel have significant potential to affect the environmental performance and regulatory compliance of the facility. Contractor personnel and the facility must therefore work together to achieve the facility's environmental policy, the environmental objectives and targets, and the protection of the environment.

Contractors must be aware of the importance of compliance with relevant environmental legislation and regulations, and the consequences of non-compliance.

The contractor is responsible for developing a Contractor Method Statement and returning it to the [Facility Name] Environmental Management Representative or designee.

The contractor is responsible for communicating to all contractor personnel the information in their Method Statement as well as information from the Contractor Environmental Briefing Package.

CONTRACTOR PERSONNEL ENVIRONMENTAL INFORMATION

[Facility's Name] *Environmental Management System*

All contractors working at **[Facility's Name]** are required to comply with the requirements of the EMS and the environmental policy. This Environmental Guide provides general details of the Environmental Management System and Environmental Policy.

Environmental Management Basics—Contractors on-site

Contractors shall not allow discharges to drains and/or sewers without prior approval from the EMS Coordinator.

Contractors shall provide adequate spill/release prevention for all bulk materials.

Contractors shall immediately notify the **[Facility's Name]** Safety Committee Champion and the Project Manager of any spills, releases, or other environmental incidents.

Contractors shall immediately notify the EMS Coordinator and the Project Manager of any abnormal conditions found during excavation at the facility. Visibly discolored soils, soils with a discernible odor, and/or heavily stained concrete must not be removed from the site without prior approval of the EMS Coordinator.

Contractors shall properly label, store, and dispose of all waste materials generated from their activities per **[Facility's Name]** procedures or guidance.

If **[Facility's Name]** personnel are required to work with potentially hazardous materials brought on-site by a contractor, prior approval of the material by the EMS Coordinator is required.

Contractors must be sensitive to the effects of noise, odor, light, fugitive dust emissions, and traffic movement to the facility and the local community.

Contractors shall be required to prepare and maintain records pertaining to the work performed in accordance with environmental regulatory requirements, including record retention requirements.

Contractors shall ensure protection of the natural environment surrounding the work area.

Contractor shall ensure that all employees are properly trained on such things as the proper handling of material and equipment, proper response to incidents involving their material, and general information relating to the **[Facility's Name]** Environmental Management System.

Environmental Management System Documents

[Facility's Name] may wish to include or provide the following information prior to contractors/subcontractors beginning work:

- Environmental Policy;
- Index of Environmental Management System procedures; and

(Example)

Procedure Number	Title	ISO 14001 Element
EP-010	Environmental Review for New Purchases, Processes, and Products	4.4.6

- Index of local procedures and work instruction.

(Example)

System Procedure/ Work Practice Number	Title	Issue Date

Contractor Method Statement

The contractor shall prepare and maintain information including a clear method statement, regarding contractor/sub-contractor activities, which outlines the work to be undertaken and the method(s) for minimizing environmental impacts and maintaining compliance with environmental regulations.

Note: To assist in organizing and maintaining information, background information sections have been included (section I, II, III). Sections can be modified or deleted as required when requesting a method statement from Contractors.

[Facility's Name] *Personnel To Complete Sections I, II, and III*
Suppliers to Complete Sections IV, V, and VI

Section I. Your Information (type or print):

Name:	
Phone Number:	
Fax Number:	
Dept Name:	
Dept Number:	

Section II. Requisition Information (type or print):

Requisition Number:	
Project Number (if applicable):	

Section III. Service or Activity to be performed (check all that apply):

Material/Chemical: (Production/Non-production)	Paint Solvent Sealer	Treatment Chemicals Lubricants, Oils, Greases Gasoline	Janitorial/Maintenance Other (specify) _____ Other (specify) _____
Facilities/Construction:	Electrical Paint Structural	Roofing Mechanical HVAC	General Contractor Arch/Engin/Consulting Other (specify) _____
Industrial Services: (Includes Environmental Services)	Asbestos Lead Maintenance Janitorial	Emergency Response Env. Consulting Paint Booth Cleaning	Waste Management Other (specify) _____
Containerization:	5 Gal. or Less Drums Totes Bulk Tanks	**Type of Contract:**	Commodity Management On-site Manager Provided Total Cost Contract

Section IV. Supplier/Contractor Information (Circle all that apply):

Current Supplier/Contractor to this Facility

New Supplier/Contractor to this Facility

Currently Involved in other Facility project(s)

List Project(s): _____

Complete Information in Table Below (type or print):

Name:	
Address:	
City:	
State:	
Phone Number:	

Fax Number:	
President/General Manager:	
Facility Site Coordinator:	
Email Address:	
Phone Number:	
Mobile Number:	
Fax Number:	
Pager:	
24-Hour Emergency Number:	

Subcontractor Information (type or print):

Type	Firm Name
Architectural	
Mechanical	
Electrical	
HVAC	
Industrial Services	
Painting	
Roofing	
Asbestos	
Architectural/Engineering	
Consulting Firm	
Sampling/Testing	
Chemical Supplier	
Other (specify)	
Scrap/Salvage Dealer	
Waste Disposal	
Demolition Disposal	

Note: It is strongly recommended you have your subcontractors and suppliers involved at this facility complete a separate environmental briefing package for the facility's review.

Supplier/Contractor is financially responsible for on-site environmental remediation actions resulting from incidents involving their employees and subcontractors. To minimize the risk of environmental accidents please review and initial the items contained in the Environmental Management Basics Table below:

Environmental Management Basics	Supplier/Contractor Initials
Supplier/Contractor understands the importance of compliance with relevant environmental legislation and regulations and the consequences of non-compliance.	
All Suppliers/Contractors working at the facility are required to comply with and ensure that their employees and any Suppliers/Sub-Contractors or agents comply with the facility's Environmental Management System (EMS) and environmental policy.	
All Suppliers/Contractors acknowledge receiving or were made aware of the facility's environmental policy as well as applicable system procedures and work practices.	
Suppliers/Contractors shall not discharge anything to drains and/or sewers without prior approval from the facility's EMS Coordinator. Spills and other releases to the environment must be immediately reported to the Safety Committee Champion.	
Suppliers/Contractors shall provide adequate spill release prevention, as approved by the facility's EMS Coordinator.	
Suppliers/Contractors shall immediately notify the facility's EMS Coordinator and the Project Manager of any abnormal conditions found during excavation activities at the facility.	
Suppliers/Contractors shall properly label, store, and dispose of all their waste materials used on-site in accordance with facility procedures and all legal requirements.	
If facility personnel are required to work with potentially hazardous materials brought on-site by a contractor, prior approval of the material by the EMS Coordinator is required.	
Suppliers/Contractors shall minimize the effects of noise, odor, light, fugitive dust emissions, and traffic movement on and/or adjacent to facility property.	
Suppliers/Contractors shall obtain, prior to commencing work, all necessary environmental approvals or permits and present copies of such permits to the facility's EMS Coordinator.	
Suppliers/Contractors were informed of actions to be taken during an actual emergency situation.	
The Supplier/Contractor understands that the facility may interrupt Supplier/Contractor activities that violate facility policies and/or all legal requirements.	

Section V. Contractor Method Statement

Respond to the following questions (use additional space where required):

This method statement must be completed, signed, and returned to the facility's Environmental Management Representative before contracted work commences.

Work Description

Briefly describe the work to be performed while on-site, including the activities of each of the suppliers/ contractors.

_____

_____

_____

_____

Air Emissions

Will the work you perform produce or cause the release of any air emissions? YES NO

IF YES, list air emissions and method for preventing impact to the environment.

_____

_____

_____

_____

Water Discharges

Will the work you perform produce or cause the release of any wastewater? YES NO

IF YES, how will the wastewater be handled?

_____

_____

_____

_____

Materials

What materials (chemicals, oils, etc.) and/or equipment will you be handling or bringing on-site to perform the contracted work?

Training

Your employees should be trained on the proper handling of materials and equipment, and the proper response to incidents involving these materials. Describe the training your employees receive.

Waste Generation

Will the work you perform result in any wastes? YES NO

IF YES, list the disposal location as well as amounts and types of wastes expected and the proposed disposal method.

Will any wastes generated be recyclable? YES NO

IF YES, list the recyclable and where and how they will be recycled.

Energy

Will the work you perform consume energy (electricity, compressed air, natural gas, steam, etc.)? YES NO

IF YES, explain what type of energy will be consumed, and how you will minimize consumption.

Other

Are there any other ways in which your work will be affecting and/or protecting the environment? YES NO

If so, please describe below.

Other

Describe methods for minimizing waste, emissions and energy usage from on-site.

Other

Describe any environmental monitoring to be performed including sampling methods, frequency, analytical requirements, and laboratory to be used.

Other

Identify environmental legal requirements applicable to the work that was not already addressed by the facility.

_____

_____

_____

_____

Section VI. Supplier/Contractor Certification (review and sign):

I have reviewed and understand the information contained in this document. I also understand that **[Facility's Name]** Personnel have the right to inspect our activities and those of our Suppliers/Contractors with regards to our on-site activities. I further understand that activities pertaining to service and/or maintenance contracts may only require submission of this form on an annual basis. The facility's Environmental Management Representative should be contacted to make this determination.

Name _____

Title _____

Signature _____

Date _____

Exhibit 12-4: **Worksheet** for **Determining Which Operations** or **Activities Require Operational Controls**

Operation or Activity with SEA to be Controlled	Procedure is Needed			No Procedure is Needed
	And Must Be Developed	Procedure Exists, but Must Be Documented	Exists and is Documented	

Contact Person: Date Complete:

Exhibit 12-5: **Worksheet** for **Linking EMS Operational Control Procedures** to **Measurement Indicators, Responsible Parties,** and **Location** of the **Documents**

SEA	Measurement Indicator(s)	Associated Job Functions	Existing Operational Control Procedures	Operational Control Procedures Development/ Modification Needed	Person Responsible / Status	Location Posted

Contact Person:

Date Complete:

Exhibit 12-6: **Worksheet** for **Training Plan** for **Operational Controls**

SEA	Operational Control Procedure(s)	Person(s) Responsible for Procedure's Implementation	Training Needs	How to Train	When/ Length	Budget	Completion Date	Person Responsible for Training

Contact Person:

Date Complete:

Examples

Example 12-1: Operational Control for Coating and Thinner User (EWI-001) through ***Example 12-6: Operational Control for Bilge and Contaminated Ballast Water (EWI-006)*** and their supporting forms provide example operational control procedures and related forms for: coating and thinner use; container labeling; hazardous waste satellite accumulation areas; empty chemical container handling; abrasive blast containment, cleanup, and storage; and bilge and contaminated ballast water. Revise these sample operational control procedures if you wish to use them. In revising them, it is crucial to review the requirements of your facility in accordance with company policies and the most recent federal, state, and local requirements.

Example 12-1: **Operational Control** for **Coating** and **Thinner Use** (EWI-001)

1.0 Purpose:

The purpose of this procedure is to maintain compliance with NESHAP Shipyard Regulations, which control the emission of volatile organic compounds (VOCs) from coatings and thinners at **[Facility's Name]**.

2.0 References:

2.1. National Emission Standards for Shipbuilding and Ship Repair (Surface Coatings) Regulations

2.2. Code of Federal Register; 40 CFR 63.780 through 40 CFR 63.788

3.0 Responsibility:

3.1. The V.P. Commercial or designee shall assure that **[Facility's Name]** Environmental Purchasing Statement requirements are included in the bid tender presented to applicable customer representatives. The Environmental Purchasing Statement is as follows: "**[Facility's Name]** in compliance with 40 CFR 63.780 through 40 CFR 63.788, is not permitted to allow the application of any coating that does not comply with the VOC (VOHAP) limitations. Failure to obtain proper approval prior to the application of any coating and/or failure to comply with these EPA regulations may result in the Owner and/or his supplier's contractors and suppliers being liable for all costs and fines associated with any non-compliance. All coatings used and procedures followed must be approved by the **[Facility's Name]** Environmental Engineer."

3.2. The V.P. Commercial or his designate shall assure that the Environmental Purchasing Statement in Sec. 3.1 is included in contracts with **[Facility's Name]** customers.

3.3 The Purchasing Agent shall assure that the Environmental Purchasing Statement in Sec. 3.1 is included in contracts with applicable subcontractors working directly for **[Facility's Name]**.

3.4. The Ship Manager shall make this procedure available to customer representatives prior to production work as applicable.

3.5 The Purchasing Subcontractor Coordinator shall make this procedure available to the applicable **[Facility's Name]** subcontractors.

3.6 The Paint Department Head shall be responsible for interfacing with the Environmental Engineer and applicable contractor or customer personnel.

Example 12-1: Operational Control for Coating and Thinner Use (EWI-001) (continued)

4.0 Procedure for contractors or customer personnel applying coatings at [Facility's Name]. The Customer's designated representative (Ship's Force and customer subcontractors) or the **[Facility's Name]** subcontractor representative shall:

4.1 Complete the top section of **[Facility's Name]**Paint Use Approval Form (EWI-001.01) and submit the completed form to the **[Facility's Name]** Environmental Engineer for approval and completion of the bottom section prior to any coating use. Complete the **[Facility's Name]** Shipyard Receipt Compliance Certification Form (EWI-001.02) and submit it to the **[Facility's Name]** Environmental Engineer prior to any coating use.

4.2 No coating shall be used that does not have a VOC data sheet or have VOC data by batch number on can labels.

4.3 Report any damaged or leaking containers to the shipyard Paint Department immediately (enter appropriate facility fax and phone numbers here).

4.4 Thinner guidelines must be strictly adhered to during mixing and application.

4.5 Assure that paint and thinner lids are in place unless mixing or applying materials.

4.6 Report actual paint and thinner use on a daily basis to the Paint Department. (See 4.3 for fax and/or phone numbers).

4.7 Control all paint and thinner not used at the end of each shift.

Approved by:

_____

Environmental Management Representative

Paint Use Approval Form (EWI-001.01)

Facility's Name
Paint Use Approval Form

This form must be completed by the Environmental Engineer, copied for retention, and returned to the requestor prior to any coating application as indicated in the request form.

Comments and/or precautions if applicable: _____

_____

_____Approve _____Disapprove

Reason _____

Signature _____Date _____

Note: Environmental Engineer's approval is required for all coatings used at ***Facility's Name*** except those coatings that are applied and reported by the Paint Department.

Facility's Name
Paint Use Approval Form

This form is to be completed by the Environmental Engineer, copied for retention, and returned to the requestor prior to any coating applications as indicated in the request form.

Comments and/or precautions if applicable: _____

_____

_____Approve _____Disapprove

Reason _____

Signature _____Date _____

Note: Environmental Engineer's approval is required for all coatings used at ***Facility's Name*** except those coatings that are applied and reported by the Paint Department.

Shipyard Receipt Compliance Certification Form (EWI-001.02)

Facility's Name

Shipyard Receipt Compliance Certification Form

Coating Identification: _____

Coating Manufacturer: _____

Container: _____

Batch Number Count: _____

Volume Received: _____ Gallons VOC Content: _____Grams/Liter

Source of Data: MSDS ____ Technical Data Sheet ____ Container Label____ Method 24 ____

Coating Category:	Code	Description	VOC Limit Grams/liter of coating
General Use	G1	General Use	340
Specialty	S1	Air Flask	340
	S2	Antenna	530
	S3	Antifouling	400
	S4	Heat Resistant	420
	S5	High-Gloss	420
	S6	High-Temperature	500
	S7	Inorganic Zinc High-Build	340
	S8	Military Exterior	340
	S9	Mist	610
	S10	Navigational Aids	550
	S11	Nonskid	340
	S12	Nuclear	420
	S13	Organic Zinc	360
	S14	Pretreatment Wash Primer	780
	S15	Repair/Maintenance of Thermoplastics	550
	S16	Rubber Camouflage	340
	S17	Sealant for Thermal Spray Aluminum	610
	S18	Special Marking	490
	S19	Specialty Interior	340
	S20	Tack Coat	610
	S21	Undersea Weapons Systems	340
	S22	Weld-Through Preconstruction Primer	650

I certify that the VOC content of this product is less than or equal to the allowable Federal VOC content for its applicable coating category.

Signed: Date:

Note: VOC limits are provided as examples only and do not attempt to represent actual conditions.

Example 12-2: **Operational Control** for **Container Labeling** (EWI-002)

0.0 Purpose:

To maintain safety on-site and ensure that, in the event of a spill of a hazardous or non-hazardous substance, the Emergency Coordinator follows the correct procedure.

1.0 References:

1.1 RCRA Subtitle C (40 CFR 262)

2.0 Responsibility:

2.1 The Environmental Engineer or designee shall assure that **[Facility's Name]** makes available labels for container labeling and ensures that employees who handle and dispose of hazardous and non-hazardous wastes understand the labeling procedures outlined here.

2.2 Managers of each department are responsible for providing the Environmental Engineer with a list of employees who handle or may potentially handle hazardous and non-hazardous wastes.

3.0 Procedure for Labeling Containers:

3.1 All containers of hazardous and non-hazardous substances should have a label. The label should include, at a minimum:

- 3.1.1 Chemical name
- 3.1.2 Hazard warning
- 3.1.3 Date
- 3.1.4 User department

3.2 All labels must be legible and written with a permanent marker.

3.3 Labels that have been damaged or removed must be replaced.

3.4 If a chemical is transferred to a portable or temporary container, then that container must also have a label.

3.5 If a chemical is flammable, an additional "DANGER/FLAMMABLE" label is required.

Approved by:

_____

Environmental Management Representative

Example 12-3: **Operational Control** for **Hazardous Waste Satellite Accumulation Areas** (EWI-003)

1.0 Purpose:

Maintain compliance with federal and state regulations for accumulating hazardous waste temporarily in various work areas at **[Facility's Name]**.

2.0 References:

2.1 40 Code of Federal Regulations 261

2.2 40 Code of Federal Regulations 262

2.3 State Hazardous Waste Regulations (to be completed by each facility)

3.0 Definitions:

3.1 Satellite Accumulation Area (SAA): an area within the facility at the point of generation that can have a maximum of 55-gallons of each type of hazardous waste generated at that location. Only one container of each type of waste may be used for accumulation in each designated SAA.

3.2 Accumulation Start Date: the date when a container stored in a SAA becomes full. The container must be moved from that location to the waste storage area within 2 days.

3.3 Full: for the purposes of this instruction, a container shall be considered to be full when waste has reached within 4-inches from the top of the container.

4.0 Responsibility:

4.1 The EMS Coordinator is responsible for overall implementation and checking for implementation of this operational control procedure.

4.2 The designated Production Supervisor for each production process is responsible for implementation of this procedure in his or her work area.

4.3 The Hazardous Waste Managers are responsible for implementation of steps defined below for their respective satellite accumulation areas.

4.4 Employees that add waste to SAAs are responsible for the items described below for Employees.

5.0 Procedure

5.1 SAAs shall be designated and tracked by the EMS Coordinator. The EMS Coordinator will maintain a map showing each SAA. The EMS Coordinator will maintain a list of all Hazardous Waste Managers.

5.2 Supervisors of areas that generate hazardous waste on a regular basis will have a Hazardous Waste Manager in their area. The Supervisor must notify the EMS Coordinator of any changes to Hazardous Waste Managers within his or her production area. The Supervisor also must notify the EMS Coordinator of the number of waste types and containers to be used in his or her SAA and of any requests for new SAAs or requests to modify an SAA.

5.3 Supervisors for areas that may generate hazardous waste on a one-time basis will coordinate with the EMS Coordinator to have the waste picked up in a timely manner. Waste should not be accumulated in these areas on a regular basis.

5.4 Each area that is designated as an SAA must comply with the following procedure.

5.4.1 Only one container for each defined type of hazardous waste is allowed in the SAA at any given time. The containers will be obtained from the EMS Coordinator and will be compatible with the waste they are to contain.

5.4.2 The container must have labels with the words "Hazardous Waste" on it before any waste can be added to the container. Labels are available from the EMS Coordinator.

Example 12-3: Operational Control for Hazardous Waste Satellite Accumulation Areas (EWI-003) (continued)

As an alternate, a marker or other means should be used to put these words on the accumulation container.

5.4.3 The label also must include a description of the type of waste in the container. The Environmental Manger will conduct any waste analysis and provide waste labels or waste labeling instructions for each waste.

5.4.4 The container will not be dated until the container is full (defined as having waste to within 4-inches from the top of the container).

5.4.5 When the container is full it will be dated. The Supervisor for each SAA is responsible for having the container moved to the hazardous waste storage area within 48 hours of it being filled and dated.

5.4.6 If a new container is needed when the existing container is full, the full one must be moved immediately to the storage area.

5.4.7 Hazardous Waste Managers should inspect their SAA area daily. These inspection records will be maintained by the SAA area in case of an inspection or internal audit. The Supervisor is responsible for making sure the inspection records are up-to-date for his or her SAA.

5.4.8 Each employee that adds waste to a container in an SAA should read the sign above the SAA area and make sure that the instructions are followed each time the container is accessed. For example, the waste is placed in the correct container, the container is closed after the addition of waste, etc. These checks do not need to be documented. The Supervisor is responsible for making sure that each employee knows to do this check and does them.

5.4.9 The EMS Coordinator will conduct a weekly inspection of all SAAs at this facility.

6.0 Records

6.1 The Hazardous Waste Managers will use the Weekly Hazardous Waste Satellite Storage Inspection Checklist (EWI-003.01) to note that they have checked their area for the day. This form will be maintained at the SAA for which they are responsible.

6.2 The signs posted above each SAA document that employees conduct "each use" checks.

6.3 The EMS Coordinator will complete the Weekly Hazardous Waste Satellite Storage Inspection Checklist (EWI-003.01) and maintain this checklist in the Environmental Office.

6.4 Training requirements for personnel supporting hazardous waste accumulation are documented under Training Operational Controls.

7.0 Revision—Date: March 2002, EWI 003 (REV 1)

Approved by:

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Environmental Management Representative

Weekly Hazardous Waste Satellite Storage **Inspection** Checklist (EWI-003.01)

Date: **Inspection Completed by:**

Note: Inspect each of the following hazardous waste satellite storage areas on a weekly basis. Note any problem and record the corrective action taken to resolve the problem.

Inspect each area for the following:

(a) Condition of drums (leaking, bulging, rusting);

(b) Cleanliness of area;

(c) Drums or containers properly closed;

(d) Drums or containers properly labeled;

(e) Drums or containers dated when full; and

(f) Full drums or containers moved to the 90-day hazardous waste storage area within 48 hours.

Satellite Accumulation Sites:	Good Condition	Needs Improvement
1.		
2.		
3.		
4.		
5.		
6.		

Example 12-4: **Operational Control** for **Empty Chemical Container Handling** (EWI-004)

1.0 Purpose:

This procedure outlines the method for handling empty chemical containers.

2.0 References:

2.1 Standards Applicable to Generators of Hazardous Waste (40 CFR 262)

2.2 General Information, Regulations, and Definitions (49 CFR 171)

2.3 Hazardous materials table, special provisions, hazardous materials communications, emergency response information, and training requirements (49 CFR 172)

2.4 Shippers-general requirements for shipments and packagings (49 CFR 173)

2.5 **[Insert any state agency rules that apply]**

3.0 Responsibility:

3.1 The Environmental Engineer or designee will ensure that employees at **[Facility's Name]** properly handle empty chemical containers.

4.0 Procedure for Handling Empty Chemical Containers:

4.1 Containers that previously held hazardous materials are exempt from further regulation after certain conditions are met. Two of the most important conditions are that the containers are "empty" and properly managed.

4.2 If the container held a material that can be easily poured, then all material left in the container must be removed any means, such as pumping, aspirating, or draining.

4.3 If the material is non-pourable, then all material that can be feasibly removed by physical means such as scraping or chipping must be removed.

4.4 If the container held an acute or extremely hazardous material or waste, the container shall be triple-rinsed using a cleaner capable of removing the material (must be done by a licensed facility).

4.5 The following is the normal practice for empty chemical container disposal:

Container Type	General Disposal Method
250- and 500-gallon totes	Returned to the vendor
55-gallon metal drums	Shipped to an approved scrap metal recycling facility
55-gallon plastic drums	Shipped to an approved plastic recycling facility
Less than 55-gallon metal	Place on pallets for incineration
Less than 55-gallon plastic	Place in normal trash container after emptying

Approved by:

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Environmental Management Representative

Example 12-5: **Operational Control** for **Abrasive Blast Containment, Cleanup,** and **Storage** (EWI-005)

1.0 Purpose:

Abrasive blasting generates large volumes of spent abrasive grit. As abrasive blasting is one of the primary tasks performed when a vessel is docked for repairs and maintenance, this guidance will help you maintain compliance and contain abrasive grit during its use.

2.0 Responsibility:

2.1 The Environmental Engineer or other designee is responsible for overseeing that employees who perform abrasive grit blasting receive proper training on handling the grit and containing the material when it is not in use.

3.0 Procedure for Containing Abrasive Blast Grit at [Facility's Name]:

3.1 Use, transport, and store abrasive blast material in a manner that prevents the material from entering storm drains and/or surface waters.

3.2 Never dispose of spent abrasive material in regular trash containers.

3.3 All containers used to store spent abrasive blast material shall be labeled "Excluded Recyclable Material, Grit Blast Only, No Trash."

3.4 Abrasive blast containers also must be located away from storm drains, gutters, and other routes to surface and ground waters.

3.5 Abrasive blast grit must be segregated from general refuse.

3.6 Containment such as tarpaulins, shrouds, or portable structures should be used whenever possible to minimize airborne particles from entering surface waters.

3.7 Stockpiles of abrasive blast grit must be managed to prevent rainwater from entering.

Approved by:

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Environmental Management Representative

Example 12-6: **Operational Control** for **Bilge** and **Contaminated Ballast Water** (EWI-006)

1.0 Purpose:

Maintain compliance with federal and state regulations for general yard cleanup at **[Facility's Name]** and to prevent the discharge of bilge and contaminated ballast water to surface and groundwater and also unauthorized discharges to the sewer and local publicly-owned treatment works (POTW).

2.0 References:

2.1 State Surface Water Regulations

3.0 Responsibility:

3.1 The EMS Coordinator is responsible for overall implementation and checking for implementation of this operational control procedure.

4.0 Procedure:

4.1 Bilge and contaminated ballast water shall not be discharged to surface waters or storm drains.

4.2 All piping, hoses, pumps, and equipment must be inspected routinely for leaks. Repair all defective equipment immediately when discovered.

4.3 When bilge and contaminated ballast water is to be removed from vessels, it should be removed as soon as practical to minimize accidental discharge or mixing of the waste with another material.

4.4 Sufficient site storage must be made available to contain the volumes of bilge and contaminated ballast water on a daily basis. Secondary containment must be in place around all storage tanks.

4.5 Booms shall be placed around all berthed vessels and barges to maximize containment of potential spills.

Approved by:

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Environmental Management Representative